



TECHNICAL INFORMATION

SINGLE REDUCTION • APPROXIMATE WEIGHTS^Δ (LBS.)

Reducer Style	Reducer Size													
	813	815	818	821	824	826	830	832	842	852	8600	8700	8800	81000
Solid Output Shaft														
BMQ	17	22	24	30	46	59	80	83	146	247	344	-----	-----	-----
BM	21	27	29	34	47	60	91	94	154	254	361	429	612	-----
B	14	20	22	27	38	51	76	79	136	232	321	399	582	904
TMQ & UMQ	19	24	26	33	54	69	96	99	156	269	364	-----	-----	-----
TM & UM	24	29	32	37	60	70	107	110	164	276	371	470	660	-----
T & U	17	22	25	30	46	61	92	95	146	254	341	440	627	980
JMQ	18	24	26	33	49	63	86	89	157	265	-----	-----	-----	-----
JM	22	29	31	37	50	64	97	100	165	272	-----	-----	-----	-----
J	15	22	24	30	41	55	82	85	177	250	-----	-----	-----	-----
VHMQ & VLQM	20	26	27	48	54	70	94	97	174	282	371	-----	-----	-----
VHM & VLM	25	31	33	42	55	71	105	108	182	289	378	500	690	-----
VH & VL	18	24	26	35	46	62	90	93	164	267	348	470	660	1060
FMQ	19	24	26	34	56	69	96	99	152	265	356	-----	-----	-----
FM	24	29	32	38	62	71	107	110	166	272	363	444	630	-----
F	17	22	25	31	48	61	92	95	148	250	333	414	600	925
BFMQ	23	-----	30	40	56	72	-----	-----	-----	-----	-----	-----	-----	-----
BFM	27	-----	35	44	57	73	-----	-----	-----	-----	-----	-----	-----	-----
BF	20	-----	28	37	48	64	-----	-----	-----	-----	-----	-----	-----	-----
CMQ	19	-----	26	-----	56	-----	-----	-----	-----	-----	-----	-----	-----	-----
CM	24	-----	32	-----	62	-----	-----	-----	-----	-----	-----	-----	-----	-----
C	17	-----	26	-----	56	-----	-----	-----	-----	-----	-----	-----	-----	-----
RMQ	-----	29	31	39	53	76	93	114	166	261	-----	-----	-----	-----
RM	-----	34	36	43	54	77	104	125	174	268	-----	-----	-----	-----
R	-----	27	29	36	46	68	89	110	156	246	-----	-----	-----	-----
Hollow Output Shaft														
HMQ	17	22	25	33	47	57	80	83	146	247	344	-----	-----	-----
HM	21	27	30	37	52	62	91	94	154	254	361	429	612	-----
H	14	20	23	28	44	54	76	79	136	222	321	399	582	904
FHMQ	18	24	27	34	52	62	96	99	158	265	356	-----	-----	-----
FHM	22	29	33	40	57	67	107	110	166	272	363	444	630	-----
FH	15	22	26	32	49	59	92	95	148	250	333	414	600	925
BFHMQ	23	-----	31	-----	43	57	70	-----	-----	-----	-----	-----	-----	-----
BFHM	27	-----	36	-----	47	62	75	-----	-----	-----	-----	-----	-----	-----
BFH	20	-----	29	-----	38	54	67	-----	-----	-----	-----	-----	-----	-----

DOUBLE REDUCTION • WORM/WORM • APPROXIMATE WEIGHTS^Δ (LBS.)

Reducer Style	Reducer Size													
	813	815	818	821	824	826	830	832	842	852	8600	8700	8800	81000
Solid Output Shaft														
DMQ	26	31	34	39	55	68	93	103	158	291	393	482	728	1151
DM	30	35	38	43	59	72	97	108	162	292	404	493	736	1158
D	25	30	33	38	52	65	90	101	155	283	389	478	718	1136
DFMQ	29	34	37	43	65	78	109	119	178	309	416	497	746	1172
DFM	33	38	41	47	69	82	113	124	182	310	427	508	754	1179
DF	28	33	36	42	62	75	106	117	175	301	412	493	736	1157
DJMQ	27	34	36	42	58	78	99	109	207	309	416	-----	-----	-----
DJM	31	38	40	46	62	82	103	114	211	310	427	-----	-----	-----
DJ	26	33	35	41	55	75	96	107	204	301	412	-----	-----	-----
DTMQ & DUMQ	29	34	37	42	63	78	109	119	176	313	424	523	776	1227
DTM & DUM	33	38	41	46	67	82	113	124	180	314	435	534	784	1234
DT & DU	28	33	36	41	60	75	106	117	173	305	420	519	766	1212
DBFMQ	32	-----	40	49	65	81	-----	-----	-----	-----	-----	-----	-----	-----
DBFM	36	-----	46	53	69	85	-----	-----	-----	-----	-----	-----	-----	-----
DBF	31	-----	39	48	62	78	-----	-----	-----	-----	-----	-----	-----	-----
DVHMQ & DVLMQ	30	36	38	47	63	79	107	120	194	326	431	553	806	1307
DVHM & DVLM	34	40	42	51	67	83	111	122	198	327	442	564	814	1314
DVH & DVL	29	35	37	46	60	76	104	115	191	318	427	549	796	1292
Hollow Output Shaft														
DHMQ	26	31	34	39	55	68	93	103	158	291	393	482	728	1151
DHM	30	35	38	43	59	72	97	108	162	292	404	493	736	1158
DH	25	30	33	38	52	65	90	101	155	283	389	478	718	1136
DFHMQ	27	34	38	44	66	76	109	119	178	309	416	497	746	1172
DFHM	31	38	42	48	70	80	113	124	182	310	427	508	754	1179
DFH	26	33	37	43	63	73	106	117	175	301	412	493	736	1157
DBFHMQ	32	-----	40	49	65	81	-----	-----	-----	-----	-----	-----	-----	-----
DBFHM	36	-----	46	53	69	85	-----	-----	-----	-----	-----	-----	-----	-----
DBFH	31	-----	39	48	62	78	-----	-----	-----	-----	-----	-----	-----	-----

^Δ Weights include oil.

REDUCER ACCESSORIES • APPROXIMATE WEIGHTS (LBS.)

Accessory	Reducer Size										
	813	815	818	821	824	826	830	832	842	852	8600
T/U	3	3	3	3	8	10	16	16	18	22	31
J	1	2	2	3	3	4	6	6	11	18	--
VL/VH	4	4	4	8	8	11	14	14	28	36	36
F (Cast Iron)	1	2	3	4	5	5	16	16	12	28	12
BF (Steel)	2	--	4	4	7	9	--	--	--	--	--
R	--	7	7	9	9	17	15	31	24	15	--

HOLLOW SHAFT BORE SIZES (Inches)*

Fraction Size	Decimal Size	Output Bore Code	813	815	818	821	824	826	830	832	842	852	8600	8700	8800	81000	Keyway**
5/8	0.625	10															3/16 x 3/32
11/16	0.688	11															3/16 x 3/32
3/4	0.750	12															3/16 x 3/32
7/8	0.875	14															3/16 x 3/32
1	1.000	16															1/4 x 1/8
1-1/8	1.125	18															1/4 x 1/8
1-3/16	1.188	19															1/4 x 1/8
1-1/4	1.250	20															1/4 x 1/8
1-7/16	1.438	23															3/8 x 3/16
1-1/2	1.500	24															3/8 x 3/16
1-5/8	1.625	26															3/8 x 3/16
1-11/16	1.688	27															3/8 x 3/16
1-3/4	1.750	28															3/8 x 3/16
1-7/8	1.875	30															1/2 x 1/4
1-15/16	1.938	31															1/2 x 1/4
2	2.000	32															1/2 x 1/4
2-3/16	2.188	35															1/2 x 1/4
2-1/4	2.250	36															1/2 x 1/4
2-7/16	2.438	39															5/8 x 5/16
2-1/2	2.500	40															5/8 x 5/16
2-11/16	2.688	43															5/8 x 5/16
2-15/16	2.938	47															3/4 x 3/8
3	3.000	48															3/4 x 3/8
3-3/16	3.188	51															3/4 x 3/8
3-7/16	3.438	55															7/8 x 7/16
3-15/16	3.937	63															1 x 1/2
4-3/16	4.187	67															1 x 1/2
4-7/16	4.437	71															1 x 1/2
4-15/16	4.937	79															1-1/4 x 5/8
5-7/16	5.437	87															1-1/4 x 5/8

Stock Bore Sizes.

* Other bore sizes are available. Contact LEESON for sizes and availability.

** Dimensions refer to customer driven shaft.

NOTE: Specify the required bore size when ordering. The suffix "XX" can be substituted with the bore code from table above. Refer to page 10 for complete model number description.



TECHNICAL INFORMATION

A.G.M.A. SERVICE FACTORS

Application	Service Factor 3-10 Hours	Service Factor Over 10 Hours					
AGITATORS							
Pure Liquids	1.00	1.25					
Liquids & Solids	1.25	1.50					
Liquids-Variable Density	1.25	1.50					
APRON CONVEYORS							
Uniformly Loaded or Fed	1.00	1.25					
Heavy Duty	1.25	1.50					
APRON FEEDERS	1.25	1.50					
ASSEMBLY CONVEYORS							
Uniformly Loaded or Fed	1.00	1.25					
Heavy Duty	1.25	1.50					
BARGE HAUL PULLERS	1.50	1.75					
BARKING							
Drums (Coupling Connected)		1.75					
Mechanical		1.75					
BAR SCREENS (Sewage)	1.00	1.25					
BELT CONVEYORS							
Uniformly Loaded or Fed	1.00	1.25					
Heavy Duty	1.25	1.50					
BELT FEEDERS	1.25	1.50					
BLOWERS							
Centrifugal	1.00	1.25					
Lobe	1.25	1.50					
Vane	1.00	1.25					
BOLTING MACHINERY	1.00	1.25					
BREWING & DISTILLING							
Bottling Machinery	1.00	1.25					
Brew Kettles, Cont. Duty	1.00	1.25					
Can Filling Machines	1.00	1.25					
Cookers-Cont. Duty	1.00	1.25					
Mash Tubs-Cont. Duty	1.00	1.25					
Scale Hoppers-Frequent Starts	1.25	1.50					
BUCKET							
Conveyors Uniform	1.00	1.25					
Conveyors Heavy Duty	1.25	1.50					
Elevators Cont.	1.00	1.25					
Elevators Uniform	1.00	1.25					
Elevators Heavy Duty	1.25	1.50					
CALENDARS							
Rubber		1.50					
Textile	1.25	1.50					
CANE KNIVES							
		1.50					
CAN FILLING MACHINES	1.00	1.25					
CAR DUMPERS	1.50	1.75					
CAR PULLERS	1.25	1.50					
CENTRIFUGAL							
Blowers, Compressors, Discharge Elevator, Fans or Pumps	1.00	1.25					
CHAIN CONVEYORS							
Uniformly Loaded or Fed	1.00	1.25					
Heavy Duty	1.25	1.50					
CLARIFIERS	1.00	1.25					
CLASSIFIERS	1.25	1.50					
CLAY WORKING INDUSTRY							
Brick Press	1.75	2.00					
Briquette Machines	1.75	2.00					
Clay Working Machinery	1.25	1.50					
Plug Mills	1.25	1.50					
COMPRESSORS							
Centrifugal	1.00	1.25					
Lobe	1.25	1.50					
Reciprocating:							
Multi-Cylinder	1.25	1.50					
Single Cylinder	1.50	1.75					
CONCRETE MIXERS							
Continuous	1.25	1.50					
Intermittent	1.25	1.50					
CONVEYORS-Uniformly Loaded or Fed							
Apron, Assembly, Belt, Bucket, Chain, Flight, Oven, Screw	1.00	1.25					
CONVEYORS-Severe Duty							
Live Roll		Contact Factory					
Reciprocating, Shaker	1.50	1.75					
COOLING TOWER FANS							
		Contact Factory					
CRANES							
Dry Dock Cranes		Contact Factory					
Main Hoist	1.00	1.25					
Bridge and Trolley Travel		Contact Factory					
CRUSHERS							
Ore or Stone	1.50	1.75					
Sugar		1.50					
DISC FEEDERS	1.00	1.25					
DOUBLE ACTING PUMPS							
2 or more Cylinders	1.25	1.50					
Single Cylinder		Contact Factory					
DRAW BENCH (Metal Mills)							
Carriage & Main Drive	1.25	1.50					
DREDGES							
Cable Reels, Conveyors	1.25	1.50					
Cutter Head & Jig Drives	1.75	2.00					
Maneuvering Winches, Pumps	1.25	1.50					
Screen Drives	1.50	1.75					
Stackers, Utility Winches	1.25	1.50					
ELEVATORS							
Bucket-Uniform Load	1.00	1.25					
Bucket-Heavy Duty	1.25	1.50					
Bucket-Continuous	1.00	1.25					
Centrifugal Discharge	1.00	1.25					
Escalators		Not Approved					
Freight		Not Approved					
Gravity Discharge	1.00	1.25					
Man Lifts, Passenger		Not Approved					
EXTRUDERS (Plastic)							
Film Sheet, Coating, Rods, Pipe Tubing	1.25	1.25					
Blow Molders, Pre-plasticizers		1.50					
FANS							
Centrifugal	1.00	1.25					
COOLING TOWERS							
Forced Draft		Contact Factory					
Induced Draft	1.25	1.25					
Large (Mine, etc.)	1.25	1.50					
Large Industrial	1.25	1.50					
Light (Small Diameter)	1.00	1.25					
FEEDERS							
Apron, Belt	1.25	1.50					
Disc	1.00	1.25					
Reciprocating	1.75	2.00					
Screw	1.25	1.50					
FLIGHT							
Conveyors, Uniform	1.00	1.25					
Conveyors, Heavy	1.25	1.50					
FOOD INDUSTRY							
Beet Slicers	1.25	1.50					
Bottling, Can Filling Mach.	1.00	1.25					
Cereal Cookers	1.00	1.25					
Dough Mixers, Meat Grinders	1.25	1.50					
HAMMER MILLS	1.50	1.75					
HOISTS							
Heavy Duty	1.75	2.00					
Medium Duty	1.25	1.50					
Skip Hoist	1.25	1.50					
INDUCED DRAFT FANS	1.25	1.50					
LAUNDRY WASHERS AND TUMBLERS	1.25	1.50					
LINE SHAFTS							
Driving Processing Equipment	1.25	1.50					
Other Line Shafts, Light	1.00	1.25					
LUMBER INDUSTRY							
Barkers-Spindle Feed	1.25	1.50					
Barkers-Main Drive	1.75	1.75					
Carriage Drive		Contact Factory					
CONVEYORS							
Burner	1.25	1.50					
Main or Heavy Duty	1.50	1.50					
Main Log	1.75	2.00					
Re-saw Merry-Go-Round	1.25	1.50					
Slab	1.75	2.00					
Transfer	1.25	1.50					
Chains-Floor	1.50	1.50					
Chains-Green	1.50	1.75					
Cut-Off Saws-Chain & Drag	1.50	1.75					
Debarking Drums	1.75	2.00					
Feeds-Edger	1.25	1.50					
Feeds-Gang	1.50	1.50					
Feeds-Trimmer	1.25	1.50					
Log Deck	1.50	1.50					
Log Hauls-Incline Well Type	1.50	1.50					
Log Turning Devices	1.50	1.50					
Planer Feed	1.25	1.50					
Planer Tilting Hoist	1.50	1.50					
Rolls-Live-Off Bearing-Roll							
Cases	1.50	1.50					
Sorting Table, Tipple Hoist	1.25	1.50					
Transfers-Chain & Craneway	1.50	1.75					
Tray Drives	1.25	1.50					
Veneer Lathe Drives		Contact Factory					
MACHINE TOOLS							
Auxiliary Drives	1.00	1.25					
Bending Rolls	1.25	1.50					
Main Drives	1.25	1.50					
Notching Press (Belted)		Contact Factory					
Plate Planers	1.50	1.75					
Punch Press (Geared)	1.50	1.75					
Tapping Machines	1.50	1.75					
METAL MILLS							
Draw Bench Carriages & Main Drives	1.25	1.50					
Pinch, Dryer and Scrubber		Contact Factory					
Rolls Reversing		Contact Factory					
Slitters	1.25	1.50					
Table Conveyors Non-Reversing		Contact Factory					
Group Drives	1.25	1.50					
Individual Drives	1.50	1.75					
Reversing Wire Drawing & Flattening		Contact Factory					
Machines	1.25	1.50					
Wire Winding Machines	1.25	1.50					
MILLS, ROTARY							
Ball and Rod Mills with Spur Ring Gear		1.75					
with Helical Ring Gear		1.50					
Direct Connect		1.50					
Cement Kilns, Dryers, Coolers, Pebble, Plain & Wedge Bar Mills		1.50					
Tumbling Barrels	1.50	1.75					
MIXERS (Also see Agitators)							
Concrete, Cont. & Int.	1.25	1.50					
Constant Density	1.00	1.25					
Variable Density	1.25	1.50					
OIL INDUSTRY							
Chillers	1.25	1.50					
Oil Well Pumping		Contact Factory					
Paraffin Filter Press	1.25	1.50					
Rotary Kilns	1.25	1.50					
PAPER MILLS							
		Contact Factory</					

Torque and Horsepower

Torque as it is related to gear reducers is defined as a twisting motion resulting in rotational movement. Horsepower is a measure of the rate of doing work, and depends on speed of rotation and the radius of rotation.

$$HP = \frac{TQ \times \text{Speed (RPM)}}{63025} \qquad TQ = \frac{HP \times 63025}{RPM}$$

Efficiency

The efficiency of a Worm Gear Speed Reducer is dependent on input speed, lead angle of the worm, type of lubricant, ambient temperature and many other variables. The efficiency for speed reducer can be easily calculated as follows.

$$\text{Efficiency} = \frac{\text{Output HP}}{\text{Input HP}}$$

Overhung Load & Thrust Loads

An overhung load exists when a force is applied at right angles to a shaft beyond the shaft's outermost bearing. Pulleys, sheaves and sprockets will cause an overhung load when used as a power take-off. The amount of overhung load will vary, depending on the type of power take-off used and its mounting location on the shaft. The catalogue Overhung Load ratings listed below are calculated at the centerline of the shaft.

Overhung load ratings are listed for each reducer size and should not be exceeded. If the basic reducer is selected using a service factor, that factor must also be used in the equations below.

Output Shaft OHL =

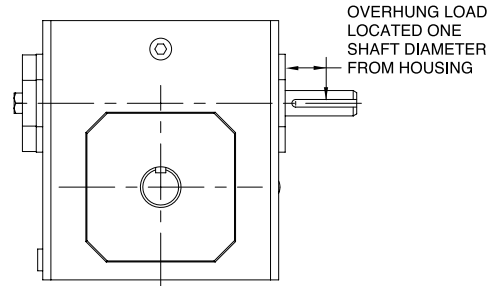
$$\frac{126000 \times \text{Motor HP} \times \text{Output HP Rating} \times \text{Overhung Load Factor}}{\text{Pitch Diameter (of sprocket, pulley or sheave)} \times \text{Input HP Rating} \times \text{Output RPM}}$$

Input Shaft OHL =

$$\frac{126000 \times \text{Motor HP} \times \text{Overhung Load Factor}}{\text{Pitch Diameter (of sprocket, pulley or sheave)} \times \text{Input RPM}}$$

Overhung Load Factors—

Sprocket	1.00
Gear Pinion	1.25
V-Belt Sheave or Pulley	1.50
Flat Belt	2.50



Maximum Overhung Load and Thrust Load Capacities (lbs.)

SINGLE REDUCTION

External Load Applied	Unit Size													
	813	815	818	821	824	826	830	832	842	852	8600	8700	8800	81000
Input Shaft OHL	75	75	75	75	125	125	150	150	175	300	450	450	450	500
Output Shaft OHL	400	500	475	475	1100	1025	1500	1450	2250	2750	3700	6200	7750	11000
Output Shaft Thrust Load	825**	800**	800**	725**	1450	1425	1725	1600	1450	1675	3625	4000	4750	6800

** Ratios 20:1 to 100:1 have a thrust load capacity of 1125 lbs.

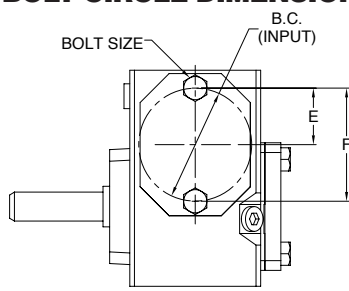
DOUBLE REDUCTION WORM/WORM

External Load Applied	Unit Size													
	813	815	818	821	824	826	830	832	842	852	8600	8700	8800	81000
Input Shaft OHL	75	75	75	75	75	75	75	75	75	125	150	150	175	300
Output Shaft OHL	400	500	475	475	1100	1025	1500	1450	2250	2750	3700	6200	7750	11000
Output Shaft Thrust Load	1125	1125	1125	1125	1450	1425	1725	1600	1450	1675	3625	4000	4750	6800

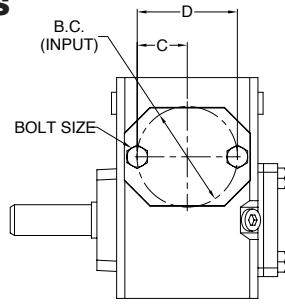
DOUBLE REDUCTION HELICAL/WORM

External Load Applied	Unit Size													
	813	815	818	821	824	826	830	832	842	852	8600	8700	8800	81000
Input Shaft OHL	75	75	75	75	75	75	75	75	150	150	150	175	300	450
Output Shaft OHL	400	500	475	475	1100	1025	1500	1450	2250	2750	3700	6200	7750	11000
Output Shaft Thrust Load	1125	1125	1125	1125	1450	1425	1725	1600	1450	1675	3625	4000	4750	6800

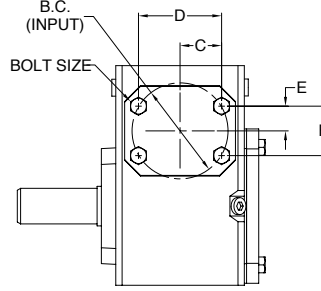
BOLT CIRCLE DIMENSIONS



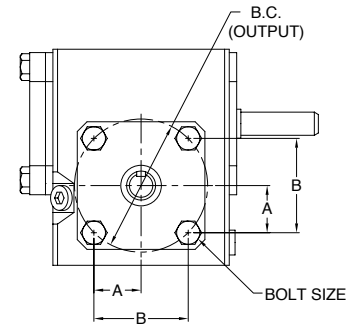
Size 813



Sizes 815-821



Sizes 824-860



INPUT COVER DIMENSIONS

Unit	C	D	E	F	INPUT B.C.	Bolt Size
813	1.219	2.438	N/A	N/A	2.438	5/16-18
815	1.219	2.438	N/A	N/A	2.438	5/16-18
818	1.219	2.438	N/A	N/A	2.438	5/16-18
821	1.219	2.438	N/A	N/A	2.438	5/16-18
824	1.313	2.625	.781	1.562	N/A	5/16-18
826	1.313	2.625	.781	1.562	N/A	5/16-18
830	1.313	2.625	.781	1.562	N/A	5/16-18
832	1.313	2.625	.781	1.562	N/A	5/16-18
842	1.600	3.200	1.050	2.100	N/A	7/16-14
852	1.600	3.200	1.050	2.100	N/A	7/16-14
860	1.370	2.740	1.370	2.740	3.875	7/16-14
8700	2.033	2.033	2.033	2.033	N/A	7/16-14
8800	2.121	2.121	2.121	2.121	N/A	1/2-13
81000	Consult Factory					5/8-11

OUTPUT COVER DIMENSIONS

Unit	A	B	OUTPUT B.C.	Bolt Size
813	1.016	2.033	2.875	5/16-18
815	1.016	2.033	2.875	5/16-18
818	1.480	2.961	4.188	5/16-18
821	1.480	2.961	4.188	5/16-18
824	1.856	3.712	5.250	5/16-18
826	1.856	3.712	5.250	5/16-18
830	2.298	4.596	6.500	3/8-16
832	2.298	4.596	6.500	3/8-16
842	2.939	5.877	8.312	7/16-14
852	3.359	6.717	9.500	7/16-14
860	Consult Factory			1/2-13
8700	Consult Factory			1/2-13
8800	Consult Factory			1/2-13
81000	Consult Factory			1/2-13

LUBRICATION

The reducer is properly filled at the factory with sufficient lubricant per customer specified mounting position.

If position is not specified by customer, reducer will be filled to level in mounting position 1 (worm over)

Reducer ordered with a "MOD" will be filled based on the factory assumed mounting position, mounting position should be specified with order to assure proper lubrication.

Factory Assumed Mounting Orientation	Applicable Unit Styles*	
Worm Over	B, T, F, H, FH, C D, DT, DF, DH, DFH DX, DXT, DXH, DXFH	Single Reduction Double Reduction Worm-Worm Double Reduction Helical-Worm
Worm Under	U DU	Single Reduction Double Reduction Worm-Worm
Vertical Output	VL, VH DVL, DVH DXVL, DXVH	Single Reduction Double Reduction Worm-Worm Double Reduction Helical-Worm
Vertical Input	J DJ DXJ	Single Reduction Double Reduction Worm-Worm Double Reduction Helical-Worm

* INCLUDES MOTORIZED COUPLING AND QUILL INPUT VERSIONS OF ALL STYLES LISTED

All standard IRONMAN BY OHIO GEAR™ Worm Reducers are factory filled with MOBIL SHC-634 lubricant, a synthesized hydrocarbon formulated for long life and wide temperature range (-25°F to +220°F).

Change oil only when performing maintenance that requires gearbox disassembly.

If oil must be replaced, use only MOBIL SHC-634

Do not confuse MOBIL SHC-634 with MOBILGEAR 634. MOBILGEAR 634 is an EP type gear oil NOT suitable for use in the IRONMAN BY OHIO GEAR™ worm gear reducers.

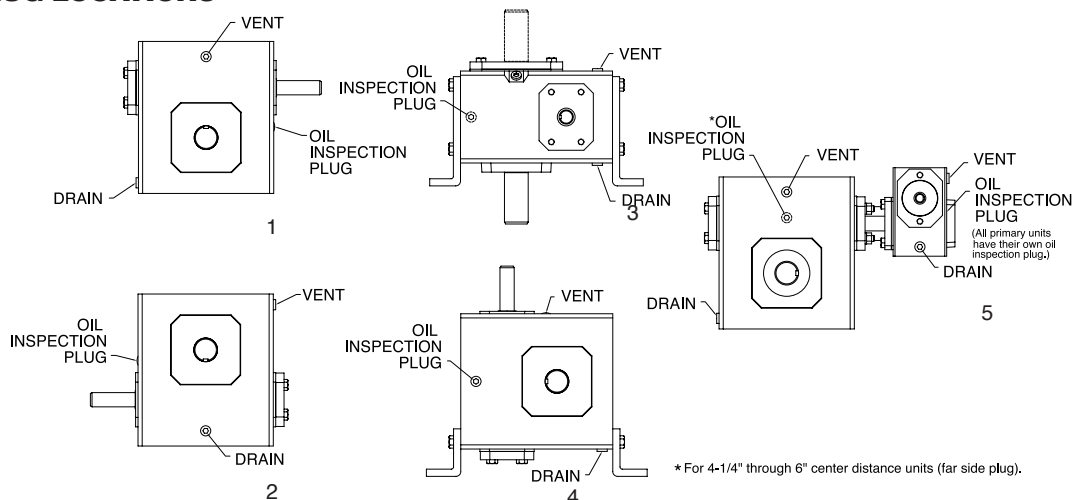
SPECIAL LUBRICATION REQUIREMENTS - Size 830 & Larger

Please specify mounting position *with order* if any of the following applies:

- 1- Reducer is mounted with input or output shafts vertical
- 2- Input speed is sustained less than 900 RPM
- 3- Reducer is mounted in inclined position

NOTE: The reducer may require modifications to assure proper lubrication in these applications.

STANDARD MOUNTING POSITIONS & PLUG LOCATIONS

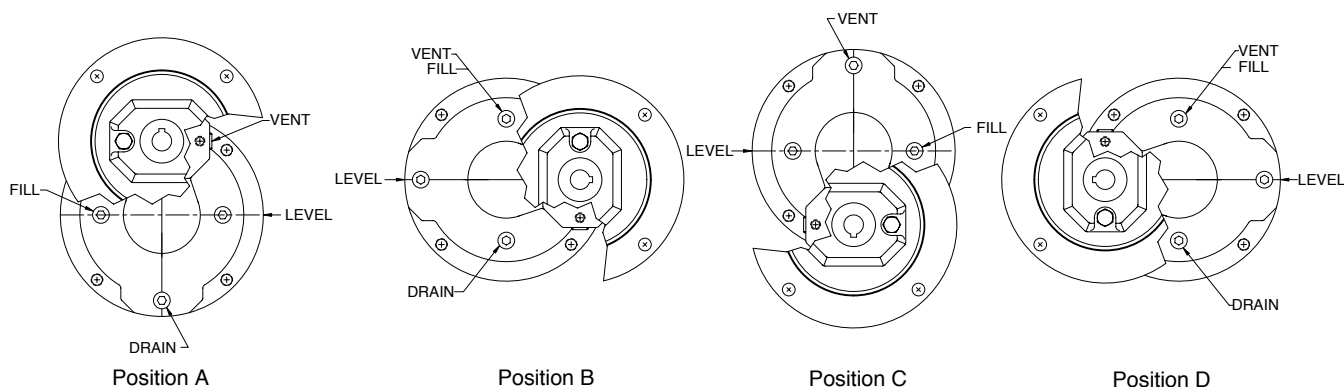


OIL CAPACITIES (ounces)

Mounting Position	UNIT SIZE													
	813	815	818	821	824	826	830	832	842	852	8600	8700	8800	81000
1-Worm Over	4	12	12	20	24	40	56	72	112	188	312	560	768	1152
2-Worm Under	8	16	20	28	40	60	84	108	152	304	328	524	820	1280
3-Vertical Output	4	16	16	28	32	48	68	88	128	248	320	332	460	640
4-Vertical Input	4	16	16	24	32	48	72	92	128	248	325	584	800	1200
5-Worm Over on Secondary Unit of Double Reduction	—	—	—	N/A	N/A	N/A	N/A	192	308	320	485	640	1008	1632

16 OZ. = 1 PINT
2 PINTS = 1 QUART
4 QUARTS = 1 GALLON
1 GALLON = 128 OZ.

RATIO MULTIPLIER VENT PLUG LOCATION



- Units are factory filled for Position 1 (input over mounting position). Verify proper oil level for other mountings.
- The "Input Under" mounting position is not recommended due to the increased probability of leakage from the high speed shaft seals.
- Special provisions are required for vertical shaft mountings. Consult factory for details.